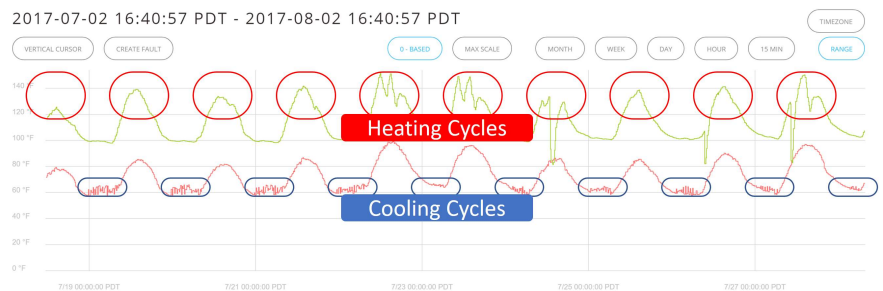


IoT Finds Dueling RTUs

THE CHALLENGE

Running a successful fitness center requires providing a comfortable setting in which patrons can exercise. Amenities and equipment has to be modern and clean, and air quality has to be on point. Managing air conditioning systems for the gym is therefore a high priority for the facilities manager. Temperature in the individual rooms must be just right: not too hot nor too cold. To accomplish this, more than a dozen roof top units (RTUs) are typically needed with some rooms being serviced by more than one RTU. At Crunch Fitness in North California for example, the cardio room was serviced by two RTUs to ensure continued comfort – each controlled by separate thermostats. Yet, during hot days members complained that the room was too hot.



THE SOLUTION

Crunch Fitness knew how important air quality was for delivering the perfect exercise experience and had installed the OptumSoft SMART HVAC system across all 14 RTUs. Upon hearing the customer complaint, the cardio rooms two RTUs were quickly located via the SMART HVAC cloud console and system performance history was examined. At first glance each RTU seemed to be functioning correctly individually. But when graphing *both systems together* the pattern became clear: one RTU was heating the cardio room while the other RTU was busy cooling **the same room**. The RTUs were *fighting* each other. Armed with this powerful insight the two thermostat settings for the cardio room was examined and – as suspected – one had a setpoint of 65° whereas the other was set at 75°. Assuming that the midpoint of 70° was the intended target, such misconfiguration caused the air conditioning to first heat the air 5 degrees and then work hard to cool the very same 5 degrees.

THE RESULTS

Unfortunately this sort of pathological behavior, where two HVAC systems are fighting each other in the same room, is all too common. Wasted electricity and uneven air quality is the unwanted result. With OptumSofts SMART HVAC solution, these patterns can now be identified and stopped. For Crunch Fitness this meant a 50% reduction in energy cost and once again very happy customers.

S M A R T H V A C S U C C E S S S T O R Y